

reduced since the junction of panel 60 (or 61) and sheet 268 is reinforced vertically, longitudinally, and in the transverse horizontal direction.

3) Amendments to the Claims

Please cancel claim 1.

After the amendments shown in marked-up version on the appended pages, the amended claims read as follows:

2. (Amended) A center beam rail road car comprising:

a deck structure carried by rail car trucks, said deck structure having first and second end portions and a medial portion lying between said first and second end portions, said medial portion being stepped downward relative to said end portions; first and second end bulkheads extending upwardly from opposite ends of said deck structure; a central beam assembly running lengthwise along said rail road car between said bulkheads, said beam assembly standing upwardly of said deck structure; said bulkheads extending to a greater height than said central beam assembly; and said bulkheads extending to a height beyond AAR plate 'C'.

7. (Amended) The center beam car of claim 2 wherein said bulkheads have a height, H1, measured relative to said medial deck portion, and said central beam assembly has a height H2 measured relative to said medial deck portion; and the ratio of H1 to H2 is at least as great as 5 : 4.

8. (Amended) The center beam car of claim 7 wherein the ratio of H1 to H2 is at least as great as 4 : 3.

9. (Amended) The center beam car of claim 8 wherein said medial portion of said deck structure is stepped downward relative to said end portions by a third height, H3, and the ratio of (H1 - H3) : (H2 - H3) is at least as great as 3 : 2.

10. (Amended) The center beam car of claim 7 wherein said medial portion of said deck structure is stepped downward relative to said end portions by a third height, H3, and the ratio of (H1 - H3) : (H2 - H3) is at least as great as 4 : 3.

11. (Amended) A center beam rail road car comprising:

a deck structure carried by rail car trucks, said deck structure having first and second end portions and a medial portion lying between said first and second end portions, said medial portion being stepped downward relative to said end portions; first and second end bulkheads extending upwardly from opposite ends of said deck structure; a central beam assembly running lengthwise along said rail road car between said bulkheads, said beam assembly standing upwardly of said deck structure; and said bulkheads extending to a greater height than said central beam assembly; and said medial portion of said deck being stepped downward relative to one of said end portions of said deck a distance of at least 30 inches.

14. (Amended) The center beam rail road car of claim 11, wherein said central beam assembly includes a top chord member extending between said end bulkheads.

16. (Amended) The center beam rail road car of claim 14 wherein said central beam assembly includes at least one post standing upwardly of said deck structure, and said top chord is wider than said at least one post.

18. (Amended) The center beam rail road car of claim 11 wherein said medial deck portion lying between said two trucks is at least 28' - 0" long.

19. (Amended) The center beam rail road car of claim 11 wherein said medial deck portion lying between said two trucks is at least 40' - 0" long.

20. (Amended) The center beam car of claim 11 wherein said rail road car further comprises: a center sill extending along said rail road car, said center sill having an upper flange, a lower flange, and at least one upright web connecting said upper and lower flanges; said upper flange lying at a height corresponding to said first end portion of said deck structure; and said lower flange lying at a height corresponding to said medial portion of said deck structure.

21. (Amended) The center beam rail road car of claim 11 wherein:

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said car has a pair of side sills extending along said deck structure;  
said side sills each have a medial side sill portion mounted to said medial deck portion,  
said medial side sill portion having a first depth of section;  
said side sills each have end side sill portions mounted to said end deck portions, said end  
side sill portions having a second depth of section; and  
said first depth of section is less than said second depth of section.

122. (Amended) The center beam rail road car of claim 11 wherein said end deck portions each  
have a lading interface upon which lading can be carried, and said respective lading interfaces  
each lie at a height greater than 42 inches above Top of Rail.

1424. (Amended) The center beam rail road car of claim 11 wherein:  
a center sill extends along said deck structure;  
said center sill has an end portion extending longitudinally outboard thereof;  
said end portion of said center sill includes a top flange and a pair of spaced apart webs  
extending downwardly of said top flange;  
said webs define sides of a draft sill portion of said center sill;  
said end portion of said center sill includes a plate mounted between said webs below  
said top flange; and  
said plate defining a top cap of said draft sill portion of said center sill.

1525. (Amended) The center beam rail road car of claim 24 wherein said said top flange of said  
end portion of said center sill lies at a height greater than 42 inches above Top of Rail, and said  
end portions of said deck structure include deck plates mounted to said top flange.

1626. (Amended) The center beam rail road car of claim 11, wherein:  
said car has a pair of side sills extending along said deck structure;  
said side sills each have a side sill medial portion mounted to said medial decking  
portion, said medial side sill portion having a first depth of section;  
said side sills each have side sill end portions mounted to said end decking structures,  
said end side sill portions having a second depth of section;  
each of said side sills has a knee joining said side sill medial portion to each of said side  
sill end portions;  
each said knee has a longitudinally inboard flange, a longitudinally outboard flange, and  
webbing extending therebetween;  
said longitudinally outboard flange has a lower extremity and an upper extremity; and

said lower extremity lies at a longitudinally inboard station relative to said upper extremity.

11 27. (Amended) The center beam rail road car of claim 2 wherein:  
said car has a pair of side sills extending along said deck structure;  
said side sills each have a medial side sill portion mounted to said medial decking portion;  
said side sills each have end side sill portions mounted to said end decking structures; and  
said medial side sill portion has a medial portion side sill web extending from a first margin to a second margin, said first margin lying at a greater height than said second margin, and said first margin lying a further distance transversely outboard than said second margin.

19 28. (Amended) The center beam rail road car of claim 27 wherein said medial decking portion has at least one lading securement apparatus mounted to said medial portion side sill web.

19 29. (Amended) A center beam rail road car comprising:  
a deck structure carried by rail car trucks, said deck structure having first and second end portions and a medial portion lying between said first and second end portions, said medial portion being stepped downward relative to said end portions;  
first and second end bulkheads extending upwardly from opposite ends of said deck structure;  
a central beam assembly running lengthwise along said rail road car between said bulkheads, said beam assembly standing upwardly of said deck structure; and  
said medial portion of said deck structure is connected to said first end portion of said deck structure at a transition member, said transition member including a foothold to facilitate ascent of said first end portion of said deck structure from said medial portion of said deck structure.

20 30. (Amended) The center beam rail road car of claim 29 wherein said transition member includes a vertical transition bulkhead extending between said medial portion of said deck structure to said first end portion of said deck structure, and said foothold is a step formed in said vertical transition bulkhead.

31. (Amended) The center beam rail road car of claim 2 further comprising;  
a center sill running along said deck structure;

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said first end portion of said deck structure having a first end deck sheet;  
said center sill having a first center sill end portion, said center sill end portion having an upper flange and a pair of spaced apart webs extending downwardly from said upper flange;  
a draft pocket cap plate mounted within said first center sill end portion between said pair of spaced apart webs, said draft pocket cap plate lying at a lower level than said deck sheet; and  
a draft pocket defined between said pair of webs and below said draft pocket cap plate.

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32. (Amended) The center beam rail road car of claim 31 wherein a first bolster extends laterally from said main sill to support said first end portion of said deck structure, said bolster having a upper flange extending in a plane lying at a greater height than said draft pocket cap plate.

26 36. (Amended) A center beam rail road car comprising:

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a deck structure carried on railcar trucks for rolling motion in a longitudinal direction, a pair of first and second bulkheads extending upwardly of said deck structure at either end thereof, and a central beam assembly standing upwardly of said deck structure and running lengthwise along said deck structure between said bulkheads;  
said central beam assembly having a top chord spaced upwardly from said deck structure, said top chord being rigidly connected to said bulkheads;  
said first bulkhead having a bulkhead sheet having a first face oriented longitudinally inboard, and a central vertical post mounted longitudinally outboard of said bulkhead sheet, said central vertical post including a pair of first and second spaced apart webs extending longitudinally outboard of said sheet;  
said central beam assembly including a shear panel extending longitudinally inboard of said bulkhead sheet, said shear panel lying in a plane offset from said webs;  
said bulkhead having transverse beams mounted between said webs of said central vertical post;  
said bulkhead having at least one shear panel extension mounted to said bulkhead sheet and extending longitudinally outboard therefrom, said shear panel extension lying longitudinally outboard of said shear panel and between said webs of said central vertical post, said shear panel extension being connected to at least one of said transverse beams.

34 44. (Amended) A center beam rail road car comprising:

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a deck structure carried on railcar trucks for rolling motion in a longitudinal direction, a pair of first and second bulkheads extending upwardly of said deck structure at either end thereof, and a central beam assembly standing upwardly of said deck structure and running lengthwise along said deck structure between said bulkheads;

said central beam assembly having a top chord spaced upwardly from said deck structure at a first height, said top chord being rigidly connected to said bulkheads;

said bulkheads extending to a height greater than said first height;

said first bulkhead having a bulkhead sheet having a first face oriented longitudinally inboard, and a central vertical post mounted longitudinally outboard of said bulkhead sheet;

said central beam assembly includes a top chord mated with said bulkhead in line with said central vertical post;

said first bulkhead has a cross beam mated to said central vertical post at a height corresponding to said first height of said top chord; and

said cross beam lies longitudinally outboard of said first bulkhead sheet and includes a pair of first and second arms extending to either side of said central vertical post, each of said arms having a proximal portion mounted to said vertical post, and a distal portion lying transversely outboard thereof, each said arm being tapered to a smaller section at said distal portion than at said proximal portion;

whereby the connection of said top chord to said first bulkheads is reinforced both vertically and transversely.

34 45. (Amended) The center beam car of claim 44 wherein said first bulkhead extends to a second height, said second height being greater than said first height.

46. (Amended) The center beam car of claim 46 wherein:

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said bolster has a pair of longitudinally spaced vertical webs; said bolster includes gussets mounted between said webs of said center sill in line with said spaced vertical webs to provide web continuity through said center sill;

first and second longitudinal gussets extend in vertical spaced apart planes between said spaced vertical webs, said first and second longitudinal gussets providing flange continuity to said first pair of flanges of said post; and